

AQUATECH INTERNATIONAL
 CORPORATION and DEBASISH
 MUKHOPADHYAY,

 Plaintiffs,

 v.

 VEOLIA WATER WEST OPERATING
 SERVICES, INC. and VEOLIA WATER
 NORTH AMERICA OPERATING
 SERVICES, LLC,

 Defendants.

This patent infringement case is related to a previously-filed declaratory judgment action between the same or related parties, Veolia Water Solutions & Technologies North America, Inc. v. Aquatech International Corporation and Debasish Mukhopadhyay, 10-484 (W.D. Pa.) (the “2010 Case”). In the 2010 Case, Veolia Water Solutions & Technologies North America, Inc. (“VWS”) sought declarations that U.S. Patent Numbers 5,925,255 (“the ’255 Patent”) and 6,537,456 (“the ’456 Patent”) were not infringed by VWS’s OPUS process. Debasish Mukhopadhyay (“Mukhopadhyay”) is the named inventor and owner of the ’255 and ’456 Patents and Aquatech International Corporation (“Aquatech”) is a licensee of those patents. For ease of reference, where appropriate, the court will refer to Mukhopadhyay and Aquatech collectively as “Aquatech” as their interests are aligned, and both parties are represented by the same counsel. The ’255 and ’456 Patents have substantially the same specifications.

In the instant case, Aquatech accuses Veolia Water West Operating Services, Inc. and Veolia Water North America Operating Services, LLC (collectively “Veolia Operating”) of

infringing the '255 Patent and U.S. Patent Number 8,641,905 (the "'905 Patent") by operating and servicing the same OPUS process that is accused of infringing the '255 and '456 Patents in the 2010 Case. The '905 Patent issued from a divisional application of the '255 Patent, and the two patents have substantially the same specifications. (ECF No. 44 at 3.) The parties agree that the claim construction issued by this court in the 2010 Case applies in this case for claim terms found in the '255 Patent. (2010 Case, ECF No. 127.)¹ The memorandum and order on claim construction entered by this court on August 20, 2012 in the 2010 Case is incorporated herein, and the reader is referred to that opinion for pertinent legal and factual background. Veolia Operating, however, contends that four claim terms or phrases found in the '905 Patent require a different claim construction for purposes of this case. The parties fully briefed the issues, and the court held a hearing on claim construction on February 2, 2015. (ECF Nos. 36, 43, and 44.)

The court was asked to construe four disputed claim terms (ECF No. 42-1):

No.	Disputed Claim Term or Phrase
1	effectively eliminating the tendency of the feedwater to form scale
2	removing hardness
3	removing substantially all non-hydroxide alkalinity
4	raising the pH of the product from step (b)

With respect to the first three terms, Veolia Operating contends that the '905 Patent requires a negative Langelier Saturation Index ("LSI") because the '905 Patent speaks to "effectively eliminating" the tendency to form scale, while the '255 Patent only calls for "reducing" the tendency to form scale.² With respect to the final claim term, Veolia Operating argues that the claim phrase "raising the pH of the product from step (b)," which appears in both

¹ Citations to documents filed at Civil Action Number 10-484 will be referred to in the format "2010 Case, ECF No. x". All other ECF No. citations refer to the docket of the instant case.

² The LSI is a measurement of effectiveness for preventing scale formation and is used to predict the potential for the occurrence of scaling of calcium carbonate. (ECF No. 43 at 8; 2010 Case, ECF No. 127 at 22-23.)

the '255 Patent and the '905 Patent, must be given a different claim construction for purposes of the '905 Patent because the surrounding claim language in the two patents differs. As will be discussed below, the court concludes that the '905 Patent does not require a negative LSI, but does require that the phrase “raising the pH of the product from step (b)” be given a different construction in this case.

1. Does the '905 Patent Require a Negative LSI? (Terms #1-3)

Claim 1 of the '905 Patent is substantially similar to claim 95 of the '255 Patent, which claim was construed by the court in the 2010 Case. Pertinent portions of both claims are reproduced below:

Claim 95 of the '255 Patent (2010 Case)	Claim 1 of the '905 Patent (2013 Case)
<p>A process ... comprising:</p> <p>...</p> <p>...<u>reducing the tendency of said feedwater to form scale</u> when said feedwater is concentrated to a preselected concentration factor at a selected pH, by effecting, in any order, two or more of the following:</p> <p>(i) removing an effective amount of hardness from said feedwater stream;</p> <p>(ii) <u>removing substantially all alkalinity</u> associated with hardness, from said feedwater stream;</p> <p>(iii) removing dissolved gas from said feedwater stream, whether initially present or created during said hardness or said alkalinity removal step</p> <p>...</p> <p>(emphasis added)</p>	<p>A process ... comprising:</p> <p>....</p> <p>...<u>effectively eliminating the tendency of said feedwater to form scale</u> when said feedwater is concentrated to a preselected concentration factor at a selected pH, by effecting, in any order, two or more of the following:</p> <p>(i) removing hardness from said feedwater stream;</p> <p>(ii) <u>removing substantially all non-hydroxide alkalinity</u> from said feedwater stream;</p> <p>(iii) removing dissolved gases, whether initially present or created during said hardness or said alkalinity removal step</p> <p>...</p> <p>(emphasis added)</p>

In the 2010 Case, after determining that the '255 Patent permitted the use of anti-scalants, the court found that the phrase “reducing the tendency of said feedwater to form scale” required no further construction. (2010 Case, ECF No. 127 at 10-14).

In the 2010 Case, VWS asserted that several terms rendered the asserted claims indefinite. One allegedly indefinite claim phrase was “removing substantially all alkalinity” in claim 95 of the ’255 Patent. This court ruled that the phrase was not indefinite, and in doing so found that:

The specification explains how to calculate the LSI to determine the tendency of feedwater to form scale at a given concentration factor and pH, and states that “with use of certain types of anti-scalant additives, an LSI of up to or about +1.5 can be tolerated, without CaCO₃ scale formation resulting.” ’255 Patent col.4 ll.14-17, Claim Construction H’rg Ex. 2. In both claim 95 of the ’255 Patent and claim 1 of the ’456 Patent, “removing substantially all alkalinity associated with hardness” is for “reducing the tendency of said feedwater to form scale when said feedwater is concentrated to a preselected concentration factor at a selected pH.”

(2010 Case, ECF No. 127 at 22.) In that opinion, the court explained that the specification and prosecution history provided a person of ordinary skill in the art (“POSA”) with sufficient guidance to determine what degree of alkalinity removal needed to be achieved, and, therefore, concluded that the claim phrase “removing substantially all alkalinity” was not indefinite. (Id. at 22-23.)

Veolia Operating now contends that while “an LSI of up to about +1.5 can be tolerated” to “reduce” the tendency to form scale, a negative LSI must be required to “effectively eliminate” that same tendency. (ECF No. 43 at 6-8; 2010 Case, ECF No. 127 at 10-14, 19-23.) According to Veolia Operating, “effectively eliminating” is different than “reducing” and requires “complete effectiveness in preventing the formation of scale,” which can only be ensured at a negative LSI. (Id. at 9.) In support of its position, Veolia Operating cites to dictionary definitions, two portions of the specification of the ’905 Patent, and a declaration filed by Mukhopadhyay during prosecution of the ’255 Patent. (Id. at 7-8, 9.) Veolia Operating argues that this court would violate the edict that a different meaning is presumed to attach when

different words are used in patent claims if the “LSI of up to about +1.5” construction is imported into the ’905 Patent. (Id. at 7.) Neither the intrinsic nor extrinsic evidence cited by Veolia Operating supports its position that the phrase “effectively eliminating” signifies a negative LSI. (ECF No. 43 at 9.)

Before proceeding, several initial points must be made:

First, in the 2010 Case, the “LSI of about +1.5 or less” construction was made in relationship to the phrase “removing substantially all alkalinity,” not “reducing the tendency.” (2010 Case, ECF No. 127 at 30.) In reaching the “LSI of about +1.5 or less” construction, this court rejected VWS’s contention that the asserted claims of the ’255 Patent were invalid as indefinite unless “removing substantially all alkalinity” was construed to mean “removing alkalinity to essentially zero.” (ECF No. 43 at 9; 2010 Case, ECF No. 127 at 19-22.) The court reviewed much of the same intrinsic and extrinsic evidence that Veolia Operating relies upon here. Although the “reducing the tendency to form scale” claim phrase modifies the “removing substantially all alkalinity” claim phrase in claim 95 of the ’255 Patent, this court was not asked to assign any special meaning to the phrase “reducing the tendency,” either alone or in comparison to the “effectively eliminating the tendency” phrase during claim construction in the 2010 Case.

Second, Veolia Operating’s current argument that use of the word “effectively eliminating” instead of “reducing” requires a negative LSI instead of an LSI of +1.5 or less contradicts VWS’s position in the 2010 Case. Although both the “reducing the tendency to form scale” and “effectively eliminating the tendency to form scale” phrases appear in the ’255 Patent, this court did not ultimately construe either of those claims. In preliminary disputed claim terms

charts, VWS, a company related to Veolia Operating,³ proposed that both phrases be given the same meaning, i.e., “avoiding.” (2010 Case, ECF Nos. 92-1 at 2, 3 and 95-1 at 2, 3.) Aquatech proposed that both phrases required no construction. (*Id.*) The “effectively eliminating the tendency to form scale” claim phrase was removed from the final version of the joint disputed claim terms chart in the 2010 Case, but the “reducing the tendency to form scale” phrase remained at issue. (2010 Case, ECF No. 99-1 at 2.) VWS continued to propose that the phrase be construed to mean “avoiding,” and argued that the patent disclaimed any embodiments that used anti-scalants. (2010 Case, ECF No. 101 at 17.) This court ruled that the patent permitted anti-scalants to be used, and concluded that no further construction of the claim phrase was required. (2010 Case, ECF No. 127 at 10-14.) The same is true here. The terms “reducing” and “effectively eliminating” are common phrases that can be readily understood by a jury, and this court need not issue any further claim construction.

Third, the court’s prior claim construction ruling was that scale formation would not occur at “an LSI of about +1.5 or less,” if an anti-scalant was used. (2010 Case, ECF No. 127 at 22.) In the 2010 Case’s claim construction opinion, this court rejected VWS’s indefiniteness argument and explained that “[t]he specification explains how to calculate the LSI to determine the tendency of feedwater to form scale at a given concentration factor and pH, and states that with use of certain types of anti-scalant additives, an LSI of up to about +1.5 can be tolerated without CaCO₃ scale formation resulting.” (*Id.* (emphasis added).) In other words, the court’s

³ Although Veolia Operating refused to admit in its answer that it is an affiliate of VWS on the basis that the term “affiliate” is vague and ambiguous, (ECF No. 28 ¶ 5), Veolia Operating has effectively admitted its association and commonality of interest with VWS in arguments made in support of having this case consolidated with the 2010 Case, and staying these proceedings in favor of the 2010 Case. (ECF Nos. 17, 31.) Veolia’s OPUS Process is accused of infringing Aquatech’s patents in both cases. VWS and Veolia Operating are represented by the same counsel.

prior construction was not that scale was less likely to be formed at “an LSI of about +1.5 or less,” but that no scale would result at that level, assuming an anti-scalant was used. (Id. at 19-23.) The court’s claim construction was not concerned with whether the tendency to form scale was “reduced,” “eliminated,” “lessened,” or “prevented” at an LSI of +1.5 or less; it was instead concerned with whether a POSA, relying on the patent’s specification, could define the phrase “removing substantially all alkalinity” as something other than “removing alkalinity to essentially zero,” as VWS proposed. (Id. at 22.) The court determined that a POSA would understand that “an LSI of up to about +1.5 can be tolerated.” (Id.) If an LSI of +1.5 removes enough alkalinity such that no scale forms, it must follow that the tendency to form scale has been both “reduced” and “effectively eliminated” at that level.

The court now turns to the evidence relied upon by Veolia Operating in this case to support its assertion that the LSI value must be negative in order to “effectively eliminate the tendency to form scale.” First, Veolia Operating contends that two portions of the specification of the ’905 Patent prove that “only a negative LSI can ensure that there will be no scaling.” (ECF No. 43 at 9.) The portions of the ’905 Patent’s specification on which Veolia Operating relies also appear in the ’255 Patent. (ECF No. 34-3 at 29 (’905 Patent, col. 4, ll. 16-24 and 39-47); 2010 Case, ECF No. 102-2 at 20 (’255 Patent, col. 4, ll. 11-17, 35-49).) In fact, the first-cited portion, ’905 Patent, col. 4, ll. 16-24, was explicitly relied upon in the court’s claim construction opinion in the 2010 Case to reject VWS’s contention that the ’255 Patent required a zero or negative LSI to prevent scale formation. (2010 Case, ECF No. 127 at 22, quoting ’255 Patent, col. 4, ll. 14-17.) That specification language provides no support for Veolia Operating’s position that a negative LSI is required to “effectively eliminate” the tendency to form scale, but an LSI of about +1.5 or less is sufficient to “reduce” the tendency to form scale. The

specification passage does not reference the terms “reduce” or “eliminate” at all, or contain any disclosure that would lead to the conclusion Veolia Operating proposes here.

The second specification passage relied upon by Veolia Operating discusses how one prior art system approaches the problem of calcium leakage at different pH levels. (ECF No. 34-3 at 29 (’905 Patent, col. 4, ll. 39-47); 2010 Case, ECF No. 102-2 at 20 (’255 Patent, col. 4, ll. 35-49).) In that prior art system a negative LSI is “acceptable” at one particular pH level, but a +2.4 LSI is “problematic” at a higher pH level. A discussion of a prior art system’s LSI calculations at different pH levels does nothing to support Veolia Operating’s argument that “effectively eliminating” denotes a negative LSI value in the ’905 Patent, while “reducing” denotes a +1.5 LSI in the ’255 Patent.

Next, Veolia Operating asserts that a declaration from the inventor establishes that the ’905 Patent requires a negative LSI. (ECF No. 43 at 9.) Veolia Operating’s citation to the “Mukhopadhyay Declaration” refers to a quotation from a “Technical Manual” published by Filmtec for the water chemistry and pretreatment industry that the inventor attached to a Rule 132 declaration in an apparent effort to overcome an obviousness rejection. (ECF No. 34-7 at 3-4, 12.) The inventor indicates that the manual sets forth a method for calculating LSI that was widely known to a POSA at the time. (Id. at 3-4.) The manual does no more than state that, in natural waters, without an anti-scalant, a negative LSI is required to prevent scaling. (Id. at 12.) The manual does not speak to the disclosures or claims of the ’905 Patent, which this court already found allow for the use of anti-scalants, and, in the inventor’s own words, discusses methods “well known” in the prior art. This evidence does nothing to support Veolia Operating’s argument that although the ’255 Patent permits a +1.5 LSI to “reduce the tendency

to form scale,” the ’905 Patent requires a negative LSI in order to “effectively eliminate the tendency to form scale.”

In summary, none of the intrinsic evidence cited by Veolia Operating supports its position that the words “reducing” and “effectively eliminating” necessitate divergent calculations of LSI with respect to how much alkalinity must be removed in the ’255 and ’905 Patents. Veolia Operating’s citation to extrinsic evidence does not warrant a different conclusion. Recitation of the dictionary definitions for “reducing,” “effectively,” and “eliminating” does not advance Veolia Operating’s argument under these circumstances. The dictionary definitions do not change the fact that the record is devoid of any indication that the patentee used the phrase “effectively eliminating the tendency to form scale” to indicate a negative LSI measurement. As discussed above, the Veolia-related entities did not hold the belief that the phrases had any different meaning when both phrases appeared in early versions of the disputed claim terms charts in the 2010 Case. (2010 Case, ECF Nos. 92-1 and 95-1.)

Upon rejecting Veolia Operating’s argument that “effectively eliminating” requires a negative LSI, the construction of disputed claim terms 1-3 follows inevitably from this court’s claim construction in the 2010 Case:

No.	Disputed Claim Term or Phrase	Construction
1	effectively eliminating the tendency of the feedwater to form scale	Based upon claim construction in the 2010 Case, anti-scalants may be used. No further construction required.
2	removing hardness	Based upon claim construction in the 2010 Case, removing includes chemical conversion. No further construction required.
3	removing substantially all non-hydroxide alkalinity	Based upon claim construction in the 2010 Case, “removing an amount of non-hydroxide alkalinity sufficient to achieve an LSI of about +1.5 or less.”

2. Is a Different Construction of the Claim Phrase “raise the pH of the product from step (b)” Required for the ’905 Patent? (Term #4)

The only other claim term that the parties ask this court to construe is the phrase “raising the pH of the product from step (b),” which appears in claim 1 of the ’905 Patent, step (c). The court construed the exact same claim phrase as it appears in claim 95 of the ’255 Patent, step (c). In the 2010 Case, the court construed the term to mean “raising the pH of the concentrated feedwater that is produced by performing step (b), i.e., the concentrated reject stream.” (2010 Case, ECF No. 127 at 25.) Veolia Operating contends that even though the exact same language is used in claim 95 of the ’255 Patent and claim 1 of the ’905 Patent, a different claim construction applies because “step (b)” is “materially different” in the two patents. The court agrees with Veolia Operating on this point.

The claims at issue are reproduced in their entirety below:

Claim 95 of the '255 Patent (2010 Case)	Claim 1 of the '905 Patent (2013 Case)
<p>95. A process for treatment of a feedwater stream in membrane separation equipment comprising at least one unit having a membrane separator to produce a low solute containing product streams and a high solute containing reject stream, said process comprising:</p> <ul style="list-style-type: none"> (a) providing a feedwater stream containing solutes therein, said solutes comprising <ul style="list-style-type: none"> (i) hardness, (ii) alkalinity, and (iii) at least one molecular species which is sparingly ionized when in neutral or near neutral pH aqueous solution; (b) concentrating said feedwater stream in a first unit of said membrane separation equipment after reducing the tendency of said feedwater to form scale when said feedwater is concentrated to a preselected concentration factor at a selected pH, by effecting, in any order, two or more of the following: <ul style="list-style-type: none"> (i) removing an effective amount of hardness from said feedwater stream; (ii) removing substantially all alkalinity associated with hardness, from said feedwater stream; (iii) removing dissolved gas from said feedwater stream, whether initially present or created during said hardness or said alkalinity removal step; (c) <u>raising the pH of the product from step (b)</u> to a selected pH of at least about 8.5, to urge said at least one molecular species which is sparingly ionized when in neutral or near neutral pH aqueous solution toward increased ionization; (d) passing the product from step (c) above through membrane separation equipment, said membrane separation equipment substantially resisting passage of dissolved species therethrough, to concentrate said feedwater to said preselected concentration factor. <p>(emphasis added)</p>	<p>1. A process for treatment of a feedwater stream in membrane separation equipment, said membrane separation equipment comprising a number N of membrane separation units, N being a positive integer, to produce a low solute containing product stream and a high solute containing reject stream, said process comprising:</p> <ul style="list-style-type: none"> (a) providing a feedwater stream containing solute therein, said solutes comprising (i) hardness, (ii) alkalinity, and (iii) at least one molecular species which is sparingly ionized when in neutral or near neutral pH aqueous solution, said at least one molecular species comprising one or more of (1) at least some TOC, or (2) at least some silica, or (3) at least some boron; (b) effectively eliminating the tendency of said feedwater to form scale when said feedwater is concentrated to a preselected concentration factor at a selected pH, by effecting, in any order, two or more of the following: (i) removing hardness from said feedwater stream; (ii) removing substantially all non-hydroxide alkalinity from said feedwater stream; (iii) removing dissolved gases, whether initially present or created during said hardness or said alkalinity removal step; (c) <u>raising the pH of the product from step (b)</u> to a selected pH of at least about 8.5 by adding a selected base thereto, to urge said at least one molecular species which is sparingly ionized when in neutral or near neutral pH aqueous solution toward increased ionization; (d) passing the product from step (c) above through N1, the first one of said membrane separation units, said membrane separation equipment substantially resisting passage of dissolved species therethrough, to concentrate said feedwater to said preselected concentration factor, to produce (i) said high solute containing reject stream, and (ii) said low solute containing permeate product stream, and (iii) wherein TOC in said product stream is less than five percent (5%) of said at least some TOC in said feedwater. <p>(emphasis added)</p>

The language of these two claims is similar, but not identical. At step (b) in claim 95 of the '255 Patent, the feedwater stream is concentrated in a first unit of membrane separation equipment after the tendency to form scale is reduced. At step (b) in claim 1 of the '905 Patent, the tendency to form scale is effectively eliminated, but the feedwater is not concentrated. The feedwater is not concentrated until step (d) of claim 1 of the '905 Patent. Veolia Operating

contends that this difference in language requires a different claim construction. Veolia Operating proposes that the claim phrase “raising the pH of the product from step (b)” in claim 1 of the ’905 Patent be construed to mean “raising the pH of the feedwater stream after effectively eliminating the tendency of the feedwater to form scale, as set forth in step (b).” (ECF No. 43 at 11.)

In its written submissions Aquatech argued summarily that the claim construction issued in the 2010 Case controls and that this claim phrase should be given its plain and ordinary meaning. (ECF No. 36 at 8-9.) Aquatech did not address in its briefing the difference in claim language or structure between claim 95 of the ’255 Patent and claim 1 of the ’905 Patent. At the claim construction hearing, Aquatech argued that a) it is improper for a court to compare and contrast the language of different claims in different patents during claim construction, and b) because the word “comprising” appears in the preamble of claim 1 of the ’905 Patent, the steps that follow can be performed in any order, and other steps can be added, making it possible for the “to concentrate” step, found in step (d) of claim 1 of the ’905 Patent, to occur before step (c). Both arguments are factually and legally incorrect, and inapposite to the circumstances of this case.

Aquatech itself acknowledges that “[a]s the ’905 Patent is a divisional patent of the ’255 Patent the specification is the same.” (ECF No. 44 at 3.) It is proper for this court to consider claim language found in related patents with identical specifications during claim construction. Mycogen Plant Science, Inc. v. Monsanto Co., 252 F.3d 1306, 1310-11 (Fed. Cir. 2001), remanded in light of Festo; Process Control Corp. v. Hydrex Corp., 190 F.3d 1350, 1356 (Fed. Cir. 1999). Aquatech provided no authority to this court to support its novel proposition that a court cannot reference and consider the disclosures and claims of the ’255

Patent in construing disputed claim terms found in the related '905 Patent. Such a proposition is contrary to every principle of claim construction with which this court is familiar, and is illogical.

Aquatech is correct that, as a general rule, “comprising,” is a “term of art that means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.” Invitrogen Corp. v. Biocrest Mfg., L.P., 327 F.3d 1364, 1368 (Fed. Cir. 2003). “In the patent context, the term ‘comprising’ is well understood to mean ‘including but not limited to.’” Exergen Corp. v. Wal-Mart Stores, Inc., 575 F.3d 1312, 1319 (Fed. Cir. 2009). However, while “comprising” permits the addition of elements not required by a claim, it “does not remove the limitations that are present.” Power Mosfet Techs., L.L.C. v. Siemens AG, 378 F.3d 1396, 1409 (Fed. Cir. 2004).

Furthermore, although it is a general rule that a claim is not limited to performance of the steps of a method claim in the order recited, exceptions apply where the claim explicitly or implicitly requires a specific order. Baldwin Graphic Sys., Inc. v. Siebert, Inc., 512 F.3d 1338, 1345 (Fed. Cir. 2008) (citing Interactive Gift Express, Inc. v. Compuserve Inc., 256 F.3d 1323, 1342-43 (Fed. Cir. 2001)) (emphasis added). A court must first look to “the claim language to determine if, as a matter of logic or grammar, [the steps] must be performed in the order written.” Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1369 (Fed. Cir. 2003); Mantech Envtl. Corp. v. Hudson Envtl. Servs., 152 F.3d 1368, 1376 (Fed. Cir. 1998) (holding that “the sequential nature of the claim steps is apparent from the plain meaning of the claim language and nothing in the written description suggests otherwise”).

In this case, the plain language and structure of claim 1 of the '905 Patent indicates that step (c) must be performed after step (b), and step (d) must be performed after step (c). Step (c) instructs a user to take “the product from step (b)” and raise the pH. Step (d) instructs the user to take the “product from step (c)” and pass it through a membrane to concentrate the feedwater. Although use of the term “comprising” does indicate that additional steps can be inserted into the process, in the context of the '905 Patent, it does not indicate that steps can be taken out of order. To do so would defy reason. As drafted, step (d)’s “to concentrate” cannot be performed until step (c)’s “raising the pH” has occurred, and step (c)’s “raising the pH” cannot occur until step (b)’s “effectively eliminating” step has taken place. The steps of this method claim must be performed in order, albeit not necessarily without interruption or addition. Aquatech’s argument that step (d) can take place before steps (b) and (c), in the context of this claim, is wrong.

The court’s analysis and conclusion is unaffected by the hypothetical that Aquatech offered at the Markman hearing in which steps (a) through (d) are performed, and then the process is repeated. In that instance, according to Aquatech, a concentrated stream (formed during the first process at step (d)) would exist before step (a) is even (re)performed. Aquatech is correct about this possible sequence of events to this point, however, it does not follow that, during the second processing, steps (b), (c), and (d) could occur out of order. Even if, as in Aquatech’s example, a concentrated stream exists prior to (re)processing, the steps must be (re)performed in order during the repeated processing. In these circumstances, the “product from step (b)” would not be the concentrated stream that existed before step (a) was even (re)performed.

For the reasons explained above, the structure and language of claim 1 of the '905 Patent contradicts Aquatech's contention that this disputed claim phrase be construed to mean "raising the pH of the concentrated feedwater that is produced by performing step (b) (i.e., the concentrated reject stream)," as it was construed in the 2010 Case. The court finds that although claim 1 uses the term "comprising," which allows additional steps to be performed, the steps that are recited must still be performed sequentially, in the order in which they are claimed. As a result, Veolia Operating is correct that a different claim construction must apply even though claim 95 of the '255 Patent and claim 1 of the '905 Patent use the identical claim phrase "raising the pH of the product from step (b)."

No.	Disputed Claim Term or Phrase	Construction
4	raising the pH of the product from step (b)	"Raising the pH of the feedwater stream after the tendency of the feedwater to form scale has been effectively eliminated, as set forth in step (b)."

An appropriate order will be entered setting forth this court's construction of claims for purposes of this litigation.

February 17, 2015

BY THE COURT:

/s/ Joy Flowers Conti
Joy Flowers Conti
Chief U.S. District Judge